

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



10/540764



(43) International Publication Date  
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number  
WO 2004/064624 A1

(51) International Patent Classification<sup>7</sup>: A61B 1/31, 8/06

(21) International Application Number:  
PCT/EP2003/000543

(22) International Filing Date: 21 January 2003 (21.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): ANTHEA  
S.R.L. [IT/IT]; Via Bentini, 37, I-40138 Bologna (IT).

(72) Inventor; and

(75) Inventor/Applicant (for US only): BURGONI, Roberto  
[IT/IT]; Via Bentini, 37, I-40138 Bologna (IT).

(74) Agents: PORSIA, Attilio et al.; Succ. Ing. Fischetti &  
Weber, 3/2, Via Caffaro, I-16124 Genova (IT).

(81) Designated States (*national*): AE, AG, AM, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CN, CO, CR, CU, CZ, DM, DZ, EC, EE, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, MA, MD, MG, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, RU, SC, SD, SG, SK, SL, TJ, TM, TN, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

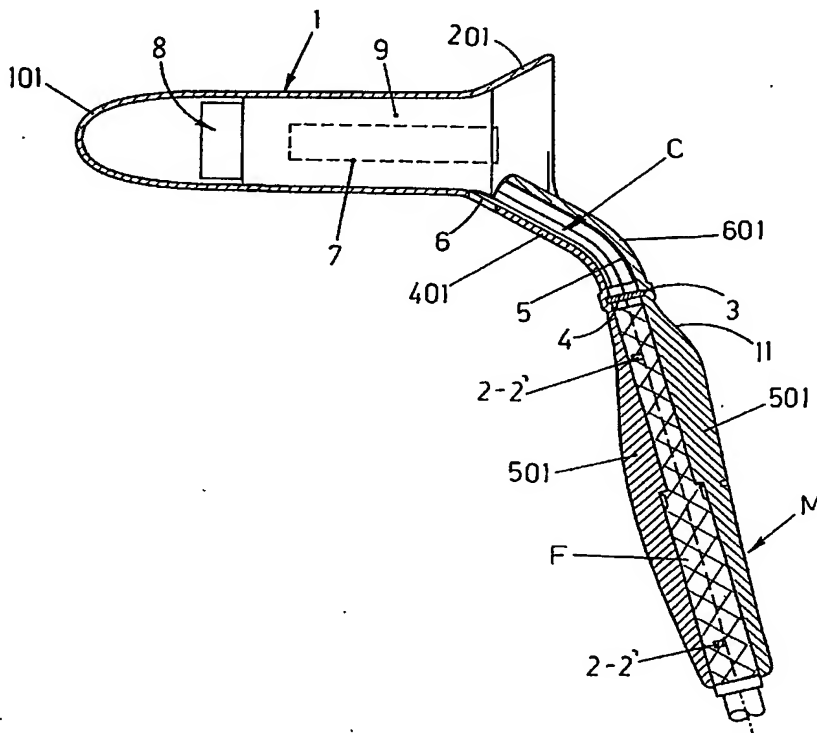
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A RETRACTOR FOR OPERATIONS ON THE ARTERIA HAEMORROIDALIS



(57) Abstract: The invention describes a disposable device for operations on the arteria haemorrhoidalis, which comprises a retractor tube (1), closed and rounded on the end (101) which is inserted in the anal cavity, and open and diverging on the external end (201) to which is connected a gripping handle (M) which removably houses a luminous source (F). In the connection zone of the handle to the external mouth of the retractor there is provided a channel (C) which contains a parabola (5) which reflects the light supplied from said luminous source (F) and which sends the reflected light inside of the same retractor, to illuminate a lateral window (8) through which appears the rectal mucosa upon which the operation must be made for the ligation of the arteria haemorrhoidalis. The haematic flow of the arteria haemorrhoidalis and the same artery are detected with precision by means of an ultrasonic probe

removably housed in a longitudinal chamber (10) provided at the interior of the retractor tube, aligned to said window (8), opened on the mouth (201) of the same retractor and also provided with a lateral opening (7) to allow to the sensor of the probe to touch the anal mucosa. The probe is preferably protected in a thin, disposable and easily removable sterilised sheath, to allow the hygienical re-utilization of the same probe.